Info 206: Computing

Lecture 0

September 1, 2015

Announcements

- No lab this week (9/2)
- First homework handed out 9/8

Course staff

- Doug Tygar, instructor
  - Office hours: Monday 11-12 (location TBA)
- April Dawn Kester, TA
  - Office hours: Friday: 1-2, Monday 2-3, Atrium
- Anand Rajogopal, TA
  - Office hours: Monday 7:30PM, coLab
- Barbara Goto, assistant to Tygar

(Course staff also available by appointment)

Lectures and labs

- Lecture: Tuesday & Thursday 9:10-10:30
- Labs: Wednesday 1:10-2

Piazza

- This class is based on Piazza.
- All hand-outs, notes, etc. will be on Piazza
  - (or linked from Piazza)
  - Notes are available after lecture (not before lecture)
- You are responsible for regularly monitoring Piazza.

Class structure

- Grades based on homework & class participation only
- No exams (at all)
- Programming in Python 2

Textbooks

- No required textbooks

- Recommended textbooks:
  - John Guttag. *Introduction to Computation and Programming Using Python*, Revised & Expanded edition.
  - Charles Severance. *Python for Informatics*.

Homework

- Class programming language is Python
- Goal: Homework assignment every week

Grading

- 75% Homework
- 25% Class & Lab participation

- Anyone who seriously attempts all homework and makes it to most classes and labs should expect a B grade or higher.

Class etiquette

- You need to attend class and lab
  - A few absences are OK
- If you use a computer in class, use it for class only
  - Don’t tweet, SMS, browse Web, use social media during class
- Keep electronics silent
  - Do NOT take a cell phone call in class

Intellectual honesty

- Cite all sources you use
- Do all homework on your own
  - unless explicitly given as joint homework
- When in doubt, ask instructor or TA

Info 206 goals

- Goal: make course highly relevant
- Move through material quickly, wide coverage
- Make course enjoyable

What is the scope of computer science?

Material we cover:

- Core material
  - Data structures
  - Algorithms
- Systems
  - “Operating systems”
  - Computer Architecture
  - Databases
  - Security
  - Networking
- Theory of computation
- Programming languages

Material we do not cover:

- Human computer interaction
- Artificial intelligence
- Graphics
- Applications

Schedule

Data structures & algorithms

9/1: Introduction

9/3: O-notation, Sorting & Searching

9/8: Arrays & Lists

9/10: Trees

9/15: Hash Tables & Dictionaries

9/17: Graphs

Systems (networking)

9/22: Networking

9/24: Network security (symmetric)

9/29: Network security (asymmetric)

10/1: Protocols

10/6: Privacy

10/8: Cloud computing

Schedule - continued

Data management

10/13: Databases

10/15: Transaction processing

10/20: Map Reduce

Theory

10/22: Regular expressions

10/27: Computability

10/29: P & NP

Operating systems

11/3: File systems

11/5: Processes & Threads

11/10: Memory management

11/12: Architecture

Programming languages

11/17: Compilers

11/19: Language survey (Functional & OO)

Schedule - continued

11/24 (no class)

11/26 (Thanksgiving)

Applications

12/1: Mobile computing

12/3: Sensors & embedded systems